

- Fig. 2. *Notonecta valcighii*. Size of adult, ?; valve of ovipositor .4 mm. x .25 mm. Specimen given to me by Mr. J. R. de la Torre Bueno.
- Fig. 3. *Notonecta undulata*. Size of adult, 10-13 mm.; valve of ovipositor, .5 mm. x .312 mm. Material from Ithaca, New York, and Lawrence, Kansas.
- Fig. 4. *Notonecta variabilis*. Size of adult, 8.2-10.2 mm.; Valve of ovipositor, .4 x .312 mm.
- Fig. 5. *Notonecta insulata*. Size of adult, 12.6-15.5 mm.; valve of ovipositor, .7 x .425 mm. Material from Palo Alto, California.
- Fig. 6. *Notonecta glauca*. Size of adult, ?; valve of ovipositor, 1.125 x .55 mm. Loaned from Nat. Museum by Mr. Gibson; a specimen from England, collected by Uhler.
- Fig. 7. *Notonecta mexicana*. Size of adult, 11-14 mm.; valve of ovipositor, .7 x .5 mm. Specimens from Arizona.
- Fig. 8. *Notonecta shooterii*. Size of adult, 8-13 mm.; valve of ovipositor, .65 x .375 mm. Specimen given to me by Mr. J. R. de la Torre Bueno.
- Fig. 9. *Notonecta irrorata*. Size of adult, 11.8-14.4 mm.; valve of ovipositor, 1.675 x .575 mm. Material taken at Ithaca, N. Y.
- Fig. 10. *Notonecta uhleri*. Size of adult, 12 mm.; valve of ovipositor, .65 x .35 mm. Specimen given to me by Mr. de la Torre Bueno.
- Fig. 11. *Notonecta indica*. Size of adult, 10.5 mm.; valve of ovipositor, .5 x .375 mm. Material from Douglas, Arizona, collected by Dr. Snow.

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## New Genera and Species of Lyonetiidae (Microlepidoptera).

By ANNETTE F. BRAUN, Cincinnati, Ohio.

### *Opostega bistrigulella* n. sp.

Head and thorax white. Fore wings white; an oblique fuscous spot at the middle of the dorsal margin with its apex pointing toward the apex of the wing. In the cilia before the apex are a very oblique costal and opposite dorsal streak, the dorsal a little the more oblique and running to the base of the black apical spot. A fuscous line in the cilia around the apex about equally distant from the apical spot above and below the apex, and leaving between it and the oblique costal streak a patch of pure white cilia. Hind wings and cilia almost white. Legs pale yellowish white. Abdomen grayish. Expanse: 12 mm.

*Locality*: Loma Linda, California, April 23 and May 27.  
(G. R. Pilate.)

*Types* in author's collection.

Especially characterized by the shape of the apical line in cilia.

***Bucculatrix ceanothiella* n. sp.**

Face and head white, the tuft with a few brown scales, antennae white, the stalk annulate with dark brown. Ground color of thorax and fore wings white, with sparse dusting of dark brown scales. The dusting becomes more dense along base of costa, and in the basal third of dorsum. Markings formed of groups of dark-tipped scales are situated as follows: a triangular costal spot just beyond one-third; a large oblique streak beyond the middle, becoming attenuated in the middle of the wing and continuing as a line of dark scales to the middle of the hind margin; a scarcely defined grouping of dark-tipped scales before the apex on the costa; a rather large semi-circular spot on the middle of the dorsum, with a few darker scales on its inner side on the fold. Cilia whitish, with a dark line from apex to dorsum. Hind wings and cilia pale silvery gray. Legs whitish. Tarsal joints dark-tipped. Abdomen whitish. *Expanse*: 6.5 mm.

*Locality*: Colton, San Bernardino County, California.

*Type* in author's collection.

The larva is a miner in the leaves of *Ceanothus*, forming at first a small semi-transparent brownish blotch mine; later it feeds externally on the under side of the leaf. Cocoon white, marked with indistinct ridges. *Larva* in February; *imago* April 5.

***Bucculatrix latella* n. sp.**

Face and antennal eye-caps white; tuft on the head white, usually with a group of ocherous hairs in the middle posteriorly. Fore wings white, with scattered minutely brown-tipped pale ocherous scales; a broad ocherous streak, sometimes nearly obsolete, from base along fold to one-fifth; on the middle of the dorsum a large conspicuous ocherous patch sometimes reaching the middle of the wing, and bordered internally just above the margin by a small patch of darker brown-tipped raised scales. A little beyond this on the costa, there is a more or less distinct patch of the pale ocherous brown-tipped scales. At the end of the cell is a minute, but distinct black dot. A patch of pale ocherous dark-tipped scales in the apex of the wing; the ocherous shade in the scales sometimes lacking, leaving only the dark tips. Hind wings grayish, cilia ocherous at their bases, shading outwardly to pure white. Legs whitish. *Expanse*: 10-12 mm.

*Locality*: Loma Linda, California. April 21 to June 4.  
(G. R. Pilate.)

*Types* in author's collection.

***Bucculatrix quadrigemina* n. sp.**

Face and antennal eye-caps white, antennal stalk annulate with brown. Tuft whitish, mixed with pale fawn. Fore wings whitish. There are four rather distinctly defined costal patches of ocherous brown-tipped scales; the first, within the basal fourth, oblique on its outer edge, passes into a pale ocherous shade below the fold; the second, narrower and more oblique; the third, broad and diffused, becoming pale ocherous toward the middle of the wing, where it meets the apex of the second spot, and a dorsal patch of darker brown-tipped raised scales occupying the middle of the dorsum opposite the space between the second and third costal spots. The fourth costal patch, lying just before the apex, is sometimes extended to enclose the entire apical portion of the wing. A small patch of dark-tipped scales on the dorsum lies between the dorsal raised scales and the apical patch. Cilia white, dusted with dark-tipped scales, especially opposite the apex and beneath the apical patch of dark-tipped scales. Hind wings and cilia gray. Legs grayish buff, tarsal segments tipped with black. Expanse: 7 mm.

*Locality*: Loma Linda, California, June 18 to 30 (G. R. Pilate).

*Types* in author's collection.

***Bucculatrix eupatoriella* n. sp.**

Face pale yellowish. Tuft ocherous in front shading to reddish brown behind. Antennal eye-caps ocherous shading to reddish outwardly; stalk, brown. Thorax and fore wings bright brownish or reddish ocherous; markings silvery metallic. At the basal two-fifths an oblique silvery costal streak; a little nearer the base an oblique silvery dorsal streak, followed immediately by a patch of dark brown raised scales. At two-thirds a second oblique costal streak, margined internally especially on the costa with dark-tipped scales, and opposite this a pair of almost confluent silvery dorsal streaks, the first margined internally, the second externally with dark-tipped scales. In the cilia above the apex is an elongated dull white spot; beneath this a transverse streak of silvery scales forms the inner border of a small black apical spot. Cilia gray with a row of brown-tipped scales extending from the dull white costal spot to the dorsum. Hind wings and cilia dark gray. Legs gray; basal and apical fourth of hind tibiae dark with black spurs, middle portion and hairs silvery; tarsi black-tipped. Abdomen dark gray above, silvery beneath. Expanse: 5.5-6.5 mm.

*Localities*: Cincinnati, Ohio; Balsam, North Carolina.

The *type* is from Cincinnati and is one of the series of reared specimens.

*Type* and *paratypes* in author's collection; paratype in the collection of the Entomological Branch, Department of Agriculture, Ottawa, Canada.

The pale green larva feeds on *Eupatorium perfoliatum*, making at first a very long much-contorted linear mine, later feeding externally on the under side of the leaf, eating small patches and leaving only the upper epidermis. A single leaf contains often twenty or more mines. The white-ribbed cocoon is spun on the under side of the leaf, usually up against the midrib. Larvae and cocoons collected August 13, produced imagoes from August 16 to 24. An earlier generation of moths appears at the beginning of July.

This species is allied to *B. trifasciella* Clemens, but differs from it in the brilliant luster of the markings and the absence of the costal streak near the base.

***Bucculatrix insolita* n. sp.**

Face dark gray, tuft of whitish and dark gray or brown scales intermixed; eye-caps grayish, antennal stalk black. Thorax and basal third of fore wings white to a line extending a little obliquely outward from costa to dorsum. Costal edge from base almost to one-third black; a few scattered black scales near base of dorsum, and usually a patch of ochereous fuscous dusting on the fold within the basal third. Middle third of wing blackish, bordered outwardly by two oblique curved white streaks, meeting in the middle of the wing. Apical third of wing dusted with fuscous, black and tawny scales. A white costal streak precedes the apex, in which there is a small black spot. Cilia dark gray, with a line of black-tipped scales around the apex. Hind wings and cilia fuscous. Legs black, tarsal segments silvery at base. Abdomen blackish with silvery gray anal tuft. Expanse: 7-7.5 mm.

*Locality*: San Bernardino Mountains, California (August 29-30), with the note "beaten from fir."

*Types* in author's collection.

The very striking contrast between the almost white basal third and the black middle of the wing will assure immediate recognition of this species.

**Bucculatrix pertenuis** n. sp.

Face and head white. Tuft white with a few darker hairs in the middle, varying from pale ochereous to brown. Antennal stalk brownish. Ground color of the thorax and fore wings creamy white, markings varying from pale ochereous with sparse dusting, to brownish ochereous. The extreme edge of the costa near the base is black or dark brown, and just within the costa is some scattered darker dusting. An ochereous streak along the fold reaches one-third of the wing length. Just before the middle of the wing, there is a narrow curved very oblique costal streak, which, before reaching the middle of the wing, bends and runs parallel to costa; its apex meets a slightly less oblique and broader, more darkly dusted costal streak beginning at the middle of the costa and running more or less distinctly across the wing into the dusting just before and beneath the apex. A broad triangular costal spot before the tip of the wing. Scattered dusting along the base of the dorsum joins an outwardly curved rather broad streak on the middle of the dorsal margin, marked on its inner side just beneath the fold by a black dot. Beyond this streak at the tornus is a dusted spot. A more or less distinct line of dusting in the apex extending obliquely toward base. A dark line around the apex in the cilia. Hind wings pale grayish ochereous. Legs whitish, anterior pair and tips of tarsi dark brown. Expanse: 6.5 mm.

*Locality*: Winnfield, Louisiana, June 27 to July 9 (G. R. Pilate).

*Types* in author's collection.

**EXEGETIA** new genus.

Head and face smooth; tongue moderate. Antennae two-thirds, in male shortly ciliate, basal segment, enlarged, flattened, concave beneath, and further enlarged by a pointed flap of scales projecting anteriorly and at apex to form a rather large eye-cap. Labial palpi short, drooping, second joint with some rough projecting scales beneath. Fore wings narrow lanceolate with the apex slightly downturned; 1b furcate at base, 2 represented only by a short spur just before 3, 3 continuous with lower margin of cell, lower angle of cell not well defined, 4 and 5 connate, 7 and 8 stalked to near costa, 7 to costa, 9 and 10 from near end of cell, 11 from before middle; cell open between 5 and 7. Hind wings two-thirds, lanceolate, cilia

3; 5 and 6 coincident, stem perceptible to base; cell open between 4 and 5 + 6, and between 5 + 6 and 7. Hind tibiae smooth.

*Genotype*: *Exegetia crocea* n. sp.

Allied to *Erioptris* Meyr. and *Otoptris* Meyr., especially to the former. In general aspect, it resembles *Tischeria*, to which it is also related, but is relatively narrower and longer winged.

***Exegetia crocea* n. sp.**

Face, head and antennal eye-caps light reddish ochereous; antennal stalk fuscous. Fore wings pale ochereous, reddish tinted at the base, with a little fuscous dusting on costa near base; shading to reddish ochereous toward apex. Hind wings and cilia pale ochereous. Legs ochereous, irrorated with purplish fuscous. Abdomen ochereous, grayish toward tip. Expanse: 11 mm.

*Locality*: Owen River Valley, California.

*Type* in author's collection.

#### DICRANOCTETES new genus.

Head, smooth; tongue present. Labial palpi long, slender, widely diverging, terminal joint two-thirds of second, acute. Maxillary palpi obsolete. Antennae two-thirds, finely ciliated in the male, basal segment flattened, scarcely enlarged. Fore wings ovate-lanceolate, apex sharply upturned; 1b simple, 2 absent, 3 from angle and continuous with lower margin of cell, 4 absent, 5, 6 and 7 out of 8, 5 from near base of stalk, 7 to costa, 9 connate with stalk of 5, 6, 7 and 8, cell open between 9 and 10, 11 from before middle of cell; cell narrow, margins becoming coincident at base. Hind wings one-half lanceolate, cilia 3; 4 absent, 6 absent, cell open between 3 and 5. Posterior tibiae with bristly hairs above.

*Genotype*: *Dicranoctetes angularis* n. sp.

Allied to *Hicroxestis* Meyr., particularly in general features of the neuration, but differing in the smooth head and absence of maxillary palpi. All the veins indicated in the description as present, are distinct, showing no tendency toward obsolescence.

**Dicranoctetes angularis** n. sp.

Face and palpi silvery; a spot at the base, in the middle and tip of the terminal segment of palpus black; head and antennae gray. Thorax and fore wings gray shading outwardly to brownish black. Just beyond the middle is an angulated white fascia almost interrupted in the middle by the blackish ground color. Costal and apical cilia white; two nearly perpendicular black streaks in the costal cilia; a black streak extending outward into the apical cilia, with a faint streak branching obliquely upward from it. A black apical spot. Cilia below the apex gray, with a black line through them starting a little below the apex. Hind wings and cilia gray. Legs silvery, fore and hind tarsi gray. Expanse: 7 mm.

*Locality*: Mountain Lake Park, Maryland, July 26.

*Type* in author's collection.

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**Description of a New Periclistus (Cynipidae, Hym.).**

By WILLIAM BEUTENMULLER, New York.

**Periclistus castanopsidis**, sp. nov.

♀. Head yellowish brown, face striately punctate, vertex and cheeks finely punctate. Antennae 14-jointed, yellowish brown, somewhat darker terminally.

Thorax black, collar yellowish brown or black, finely punctate and pubescent. Parapsidal grooves almost continuous, not quite extending to the collar and most distinct at the scutellum; the grooves are parallel to about the middle, then curve inwardly to the scutellum where they are moderately widely separated. Anterior parallel lines exceedingly fine and scarcely evident. Median groove wanting. Lateral grooves scarcely evident. Pleurae black, striate, with a large black, glossy area. Scutellum black, rugose, basal fovea large.

Abdomen yellowish brown with a large brown-black dorsal patch, smooth and shining.

Legs pale yellowish brown. Wings hyaline. Radial area closed. Cubitus continuous. Areolet large. Length, 2.25 mm.

*Habitat*: Truckee, California (H. G. Dyar).

Described from two females reared from galls of *Andricus castanopsidis* Beutm., on *Castanopsis chrysophylla*, March 14, 1914. It is a guest-fly.

*Type*: Collection United States National Museum. *Co-type*: Collection of Wm. Beutenmuller.